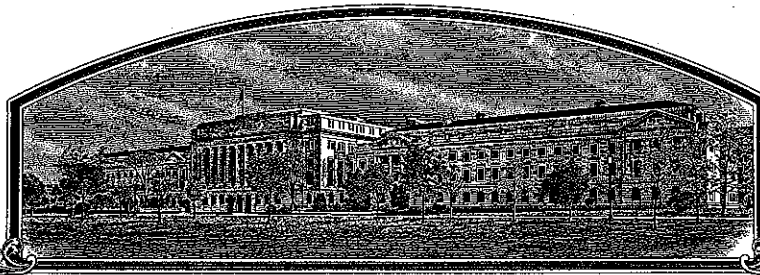


No.

200600237



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Syngenta Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE HERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Kelby'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eleventh day of December, in the year two thousand and six.

Attest:

[Signature]
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]
Secretary of Agriculture



**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE
APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Syngenta Seeds, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 98S0113-20		3. VARIETY NAME Kelby	
4. ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 6515 Ascher Road Junction City, Kansas 66441		5. TELEPHONE (include area code) 785-210-0218		<div style="border: 1px solid black; padding: 2px;"> FOR OFFICIAL USE ONLY PVPO NUMBER <div style="font-size: 1.5em; font-weight: bold;">200600237</div> </div>	
6. FAX (include area code) 785-210-0231		6. FAX (include area code) 785-210-0231		FILING DATE <div style="font-size: 1.2em;">July 13, 2006</div>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM ORGANIZATION (corporation, partnership, association, etc.) Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		9. DATE OF INCORPORATION 2000	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Rollin Sears 6515 Ascher Road Junction City, Kansas 66441				<div style="border: 1px solid black; padding: 2px;"> FILING AND EXAMINATION FEES: <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold;">F E E S R E C E I V E D</div> <div> <div style="display: flex; justify-content: space-between;"> <div> ① 3652.00 ② 730.00 </div> <div> DATE 7/13/2006 8/14/2006 </div> </div> <div> CERTIFICATION FEE: \$ 768.00 DATE 10/24/2006 </div> </div> </div> </div>	
11. TELEPHONE (Include area code) 785-210-0218		12. FAX (Include area code) 785-210-0231		13. E-MAIL rollin.sears@agripro.com	
14. CROP KIND (Common Name) Hard Red Spring Wheat		16. FAMILY NAME (Botanical) Gramineae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)				20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23)	
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED				22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)				24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER <div style="border-top: 1px solid black; height: 20px; margin-top: 10px;"></div>			SIGNATURE OF OWNER <div style="border-top: 1px solid black; height: 20px; margin-top: 10px;"></div>		
NAME (Please print or type) Dr. Rollin Sears			NAME (Please print or type) <div style="font-family: cursive; font-size: 1.2em;">Rollin Sears</div>		
CAPACITY OR TITLE R&D Manager		DATE <div style="font-size: 1.5em;">6/5/06</div>		CAPACITY OR TITLE 	
				DATE 	

(See reverse for instructions and information collection burden statement)

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. **Retain one copy for your files.** All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
 - (2) the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice*, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

The variety 'KELBY' will be constituted from Breeder seed, and proceed through Foundation, Registered and Certified in succeeding generations. Generations which may be multiplied will be Breeder seed, Foundation, Registered and Certified.

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Foundation seed was sold in December 2005. Certified seed stocks of KELBY will be available in the Spring of 2007.

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit A.

Origin and Breeding History of Kelby

Kelby originated from the cross "N97-0117/3/N92-0098//Sumai 3/Dalen" which was made in Berthoud, CO during the fall crossing session of 1997. N97-0117 is an AgriPro experimental with the pedigree "N87-0035/Dalen//Lars". The pedigree of N87-0035 is "MN74103/Oligoculm/5/CNO/Gallo/4/CNO//7C/TOB/3/SD6485/8156". N92-0098 is an experimental with the pedigree "MN72506/MN7222/3/Erik//Norseman/MN73167". Sumai 3 is a Chinese wheat used for its fusarium head blight tolerance. (CNO - Ciano 67; TOB - Tobari 66; 7C- Siete Cerros; Anything else would be considered 'source unknown'.)

Single heads were selected from the F2 population of this cross at Casselton, ND during the 1998 season. Selections were based on height, leaf rust and scab tolerance. Single seed descent was used to advance these selections through the F3 and F4 generations in the Berthoud greenhouse during the fall and winter of 1998-99. F5 headrows of these selections were planted at Casselton, ND in 1999 where they were further screened for height, straw strength, foliar diseases, scab, leaf rust and stem rust. Selected F5 headrows were individually bulk harvested and assigned experimental designations. 98S0113-20 was the designation used for Kelby throughout its advanced testing stages. An F6 increase plot was grown at Berthoud and observation plots were grown at Casselton, ND, Park River, ND and Crookston, MN in 2000. 98S0113-20 was further screened on the previously mentioned traits as well as breadmaking quality. 98S0113-20 was yield and quality tested in AgriPro nurseries in North Dakota, South Dakota and Minnesota during 2001 through 2005. This line has been tested in the Northern Uniform Regional Nursery in 2003 and 2005.

In 2002, 48 plots derived from single F8 plants were grown in Berthoud, Colorado. Forty of these plots with uniform appearance were harvested and planted as progeny plots in 2003 and 2004. In 2004, two of the 40 progenies were discarded and the remaining plots were bulked to provide 4985 lbs of Breeder Seed. During the winter of 2004-5, 350 lbs of this seed was planted on 11.3 acres in Yuma, Arizona that produced an additional 40,286 lbs Breeder Seed. In 2005, three Foundation seed increases were grown in North Dakota, South Dakota and Minnesota.

Kelby has been uniform and stable since 2004. About 0.1% of the plants were rogued from the initial Breeder's Seed increase in 2001. Approximately 70% of the rogued variant plants were taller height wheat plants (5 to 15 cm.) and approximate 10% were awnletted wheat plants. Up to 1.0% variant plants may be encountered in subsequent generations.

Exhibit B.
Statement of Distinctness

Kelby is most similar to the hard red spring wheat 'Briggs'. However, it can be easily distinguished by the following morphological characteristics:

- Kelby has a short glume length (Berthoud, CO 2005-2004). Briggs has a medium glume length (Berthoud, CO 2005-2004).
- Kelby has a middense head density (Berthoud, CO 2005-2004). Briggs has a dense head density (Berthoud, CO 2005-2004).

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved OMB NO 0581-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
BELTSVILLE, MARYLAND 20705**

EXHIBIT C

**OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* Spp.)**

NAME OF APPLICANT(S) Syngenta Seeds, Inc.	TEMPORARY OR EXPERIMENTAL DESIGNATION 98S0113-20	VARIETY NAME Kelby
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 6515 Ascher Road Junction City, Kansas 66441		FOR OFFICIAL USE ONLY PVPO NUMBER 200600237

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g., 0 9 9 or 0 9) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____ Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:**1**

- 1=Common
2=Durum
3=Club
4=Other (specify) _____

2. VERNALIZATION:**1**

- 1=Spring
2=Winter
3=Other (specify) _____

3. COLEOPTILE ANTHOCYANIN:**1**

- 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:**3**

- 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):**2**

- 1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF (boot stage):**2**

- 1 = Erect 2 = Recurved

2

- 1 = Not Twisted 2 = Twisted

2

- 1 = Wax Absent 2 = Wax Present

7. EAR EMERGENCE:**0** **0**

Number of Days (Average)

0

Number of Days Earlier Than *

0.5

Number of Days Later Than

* Briggs

*Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

8. ANTER COLOR:**1**

- 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT: (from soil to top of head, excluding awns):

200600237

0	7	0
---	---	---

cm (Average)

cm Taller Than

* _____

--	--

Same As

* _Lars _____

--	--

cm Shorter Than

* _____

10. STEM:

A. ANTHOCYANIN

1

1 = Absent 2 = Present

B. WAXY BLOOM

2

1 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

2

1 = Absent 2 = Present

D. INTERNODE

1

1 = Hollow 2 = Semi-solid 3 = Solid

5

Number of Nodes

E. PEDUNCLE

2

1 = Erect 2 = Recurved 3 = Semi-erect

1	9
---	---

cm Length

F. AURICLE

2

Anthocyanin 1 = Absent 2 = Present

2

Hair: 1 = Absent 2 = Present

11. HEAD: (At Maturity)

A. DENSITY

2

1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

1

1 = Tapering
2 = Clavate
3 = Strap
4 = Other (specify) _____

C. CURVATURE

2

1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

4

1 = Awnless
2 = Apically awnletted
3 = Awnletted
4 = Awned

12. GLUMES: (At Maturity)

A. COLOR

1

1 = White
2 = Tan
3 = Other (specify) _____

E. BEAK WIDTH

2

1 = Narrow
2 = Medium
3 = Wide

B. SHOULDER

2

1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (Specify) _____

F. GLUME LENGTH

1

1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

C. SHOULDER WIDTH

2

1 = Narrow
2 = Medium
3 = Wide

G. WIDTH

2

1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Long (ca. 4mm)

D. BEAK

3

1 = Obtuse
2 = Acute
3 = Acuminate

13. SEED:

A. SHAPE

1

- 1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

2

- 1 = Round
2 = Angular

C. BRUSH

2

- 1 = Short
2 = Medium
3 = Long

1

- 1 = Not Collared
2 = Collared

E. COLOR

3

- 1 = White
2 = Amber
3 = Red
4 = Other (Specify) _____

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F. TEXTURE

1

- 1 = Hard
2 = Soft
3 = Other (Specify) _____

G. PHENOL REACTION (See Instructions)

0

- 1 = Ivory
2 = Fawn
3 = Light Brown
4 = Dark Brown
5 = Black

D. CREASE

2

- 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

H. SEED WEIGHT

g/1000 Seed (Whole number only)

I. GERM SIZE

3

- 1 = Small
2 = Midsize
3 = Large

14. DISEASE:

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

2Stem Rust (*Puccinia graminis* f. sp. *tritici*)**2**Leaf Rust (*Puccinia recondita* f. sp. *tritici*)**0**Stripe Rust (*Puccinia striiformis*)**0**Loose Smut (*Ustilago tritici*)**4**Tan Spot (*Pyrenophora tritici-repentis*)**0**Flag Smut (*Urocystis agropyri*)**0**Halo Spot (*Selenophoma donacis*)**0**Common Bunt (*Tilletia tritici* or *T. laevis*)**0***Septoria nodorum* (Glume Blotch)**0**Dwarf Bunt (*Tilletia controversa*)**4***Septoria avenae* (Speckled Leaf Disease)**0**Karnal Bunt (*Tilletia indica*)**0***Septoria tritici* (Speckled Leaf Blotch)**0**Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)**3**Scab (*Fusarium* spp.)**0**

Snow Molds

0

Black Point (Kernel Smudge)

0Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)**0**

Barley Yellow Dwarf Virus (BYDV)

0Rhizoctonia Root Rot (*Rhizoctonia solani*)**0**

Soilborne Mosaic Virus (SBMV)

0Black Chaff (*Xanthomonas campestris* pv. *translucens*)**0**

Wheat Yellow (Spindle Streak) Mosaic Virus

0Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)**0**

Wheat Streak Mosaic Virus (WSMV)

Other (specify) _____

Other (specify) _____

Other (specify) _____

Other (specify) _____

Other (specify) _____

15. INSECT:

(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

0Hessian Fly (*Mayetiola destructor*)

Other (specify) _____

0Stem Sawfly (*Cephus* spp.)

Other (specify) _____

0Cereal Leaf Beetle (*Oulema melanopa*)

Other (specify) _____

15. INSECT: (continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

200600237

0

Russian Aphid (*Diuraphis noxia*)

☐

Other (specify)

0

Greenbug (*Schizaphis graminum*)

☐

Other (specify)

0

Aphids

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

None

8

Exhibit D.
Additional Description of Kelby

Kelby is a hard red spring wheat bred and developed by AgriPro under the experimental designation of W98S0113-20 intended for grain production. Kelby is a semidwarf variety and has very good lodging resistance. It has early maturity and very good test weight. It has very good protection to the prevalent races of leaf rust and to foliar diseases. This variety was intended as a bread wheat and has high protein and satisfactory breadmaking characteristics. Kelby is broadly adapted to the spring wheat growing areas of the northern plains.

Juvenile growth habit is erect. Plant color at boot stage is green. Flag leaf at boot stage is recurved and twisted. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is tapering, middense and awned. Glumes are glabrous, midwide in width and short in length with oblique shoulders and acuminate beaks. Seed shape is ovate. Brush hairs are medium in length and occupy a large area of the seed tip. Seed crease depth is middeep and width is midwide. Seed cheeks are angular.

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AgriPro Spring Wheat Quality Summary

Year-Loc	Flour/Wheat Quality					Baking Quality							
	Wht Prot	Flr Prot	Flr Yld	Peak Ash	Time	Mixogram		Abs	BakeMix Time	Loaf Vol	Crumb		
						Peak Ht.	Bake Tol.				Grain	Tex	Col
14% m	14% m%	14% m	min	N.U.	mm	%	min	cc	R	R	R		
KELBY													
2005 - ARPR	15.4	14.1	70.8	0.500	2.75	5.0	919	67.0	2.60	1005	4	2	3
2004 - BKPR	15.0	13.8	70.8	0.428	3.00	5.0	1206	68.0	3.00	990	4	3	3
2003 - BKPR	15.0	13.9	70.8	0.411	3.00	5.0	987	68.0	2.70	1040	4	3	3
2002 - MW	15.2	14.0	65.2	0.423	5.75	5.0	1212	68.0	6.10	1125	4	3	3
Average:	15.2	14.0	69.4	0.441	3.63	5.0	1081	67.8	3.60	1040	4	3	3
ALSEN													
2005 - ARPR	15.5	14.1	69.9	0.496	3.25	5.3	1278	67.0	3.10	1150	4	3	3
2004 - BKPR	14.8	13.9	71.7	0.436	3.75	5.3	1393	68.5	3.30	1045	3	2	3
2003 - BKPR	15.4	13.8	71.4	0.404	3.75	5.5	892	69.5	3.30	1100	4	3	3
2002 - MW	15.5	14.3	67.1	0.466	6.25	5.3	1256	68.5	8.00	990	3	3	3
Average:	15.3	14.0	70.0	0.451	4.25	5.3	1205	68.4	4.43	1071	3	3	3
KELBY													
2005 - MI	15.6	14.4	69.7	2.50		5.0	814	70.0	2.20	860	5	4	5
2005 - ARPR	15.4	14.1	70.8	0.500	2.75	5.0	919	67.0	2.60	1005	4	2	3
2004 - BKPR	15.0	13.8	70.8	0.428	3.00	5.0	1206	68.0	3.00	990	4	3	3
2003 - BKPR	15.0	13.9	70.8	0.411	3.00	5.0	987	68.0	2.70	1040	4	3	3
2002 - MW	15.2	14.0	65.2	0.423	5.75	5.0	1212	68.0	6.10	1125	4	3	3
Average:	15.2	14.0	69.5	0.441	3.40	5.0	1028	68.2	3.32	1004	4	3	3
NORPRO													
2005 - MI	14.5	13.3	69.0	3.00		5.0	839	67.0	2.50	975	4	3	3
2005 - ARPR	14.5	12.9	69.2	0.583	2.50	5.3	943	64.5	2.80	860	5	4	3
2004 - BKPR	14.3	12.8	71.4	0.466	2.75	5.3	1361	66.0	2.70	895	4	3	3
2003 - BKPR	14.5	12.8	70.3	0.440	2.75	5.5	828	65.5	2.60	1035	3	3	3
2002 - MW	14.4	13.4	66.3	0.487	4.25	5.3	1072	68.0	5.00	1035	3	3	3
Average:	14.4	13.0	69.2	0.494	3.05	5.3	1009	66.2	3.12	960	4	3	3

Locations: AR – Argusville, ND; PR – Park River, ND; MI – Minot, ND ; BK – Breckenridge, MN ; MW – Blend of sites
 Crumb rating: 1 – best, 9 - worst

2003-5 OVER YEAR SUMMARY OF E. ND/MN SITES RANKED YIELD - AGRIPRO DATA														
					TEST					FOLIAR	SEED		LEAF	
	YIELD - BU/A ³				WT.	PROT.	HEAD. ²	HT.	LOD.	DIS.	SCORE	FDK	RUST	WORTH
VARIETY	03	04	05	AVG	LBS/BU	%	1-9	1-9	1-9	1-9	1-9	%	1-9	1-9
KNUDSON	79.1	79.3	60.9	73.1	61.3	13.8	5.2	5.5	2.6	3.0	4.3	6.8	2.0	4.3
98S0127-06	76.8	79.8	60.5	72.4	61.3	13.8	5.1	4.3	1.7	4.1	4.1	9.7	3.5	3.7
FREYR	79.5	75.2	60.3	71.7	61.3	14.7	4.7	6.6	3.3	3.9	3.3	3.9	3.9	4.8
NORPRO	78.1	80.5	52.4	70.3	59.6	14.3	5.6	4.6	2.4	3.5	5.7	19.1	3.4	4.2
TROOPER ¹	76.2	76.7	56.8	69.9	61.6	13.7	3.3	4.3	1.0	5.3	4.1	9.1	3.4	5.1
POLARIS ¹	75.5	78.5	54.5	69.5	60.0	13.1	8.6	7.0	1.0	3.9	4.9	22.5	5.5	5.0
LARS	78.4	74.7	53.5	68.9	58.4	13.3	5.9	4.1	1.4	4.4	6.6	27.7	5.3	4.3
BRIGGS	72.0	75.0	55.3	67.4	61.1	15.1	2.8	6.6	6.2	3.5	4.1	9.0	2.4	5.4
KELBY	70.8	76.0	55.3	67.4	61.6	15.3	3.3	4.1	2.8	3.7	4.3	4.1	2.9	3.9
STEELEND ¹	73.3	71.9	56.1	67.1	61.4	15.1	4.4	7.1	5.7	4.1	4.1	10.9	2.0	6.3
HANNA	69.9	74.0	56.4	66.8	61.6	14.8	4.9	8.2	4.6	5.4	3.8	3.1	5.4	5.6
GRANITE	73.5	75.5	50.4	66.5	62.8	15.8	7.0	5.9	1.2	5.0	4.8	23.0	4.8	5.0
OKLEE	72.0	69.6	55.6	65.7	62.5	15.1	3.2	6.0	5.4	5.6	3.3	5.4	5.6	5.4
ALSEN	69.4	71.6	53.4	64.8	62.4	15.2	4.1	6.2	3.1	4.9	3.8	3.2	4.8	4.5
GRANGER	71.0	70.0	53.2	64.7	61.7	14.7	3.5	8.1	6.0	4.6	4.4	5.4	4.0	6.4
REEDER	73.0	69.2	46.5	62.9	60.2	14.7	4.5	7.0	4.4	5.4	4.9	14.9	6.6	5.8
NORA	64.2	63.5	43.4	57.0	59.0	15.3	4.9	3.7	2.9	6.4	5.2	15.8	4.9	5.5
GUNNER	64.0	60.3	43.6	56.0	61.3	14.6	7.0	7.8	2.7	7.4	3.7	5.2	7.5	6.1
MEAN	74.4	74.6	55.0	68.0	60.9	14.5	5.1	5.7	3.0	4.5	4.5	10.8	3.9	4.9
NO. OF LOCS.	6	5	5	16	16	15	17	8	4	14	14	16	10	15
¹ Not tested in 2003, data adjusted for averages														
² Heading: 1 = early; Height: 1 = short; Lodging: 1 = no lodging; Foliar disease: 1 = no disease; Leaf rust: 1 = resistant														
³ Locations: Argusville, ND; Valley City, ND; Maddock, ND; Park River, ND; Breckenridge, MN; Crookston, MN														

*Heading: AgriPro does not collect data on days to planting/heading. Instead we use a 1-9 relative rating scale where each increment = one day.

*Height: 4 rating = 70 cm's

2003-5 OVER YEAR SUMMARY OF SOUTH DAKOTA SITES RANKED BY YIELD - AGRIPRO

					TEST					FOLIAR	SEED		LEAF	
	YIELD - BU/A ²				WT.	PROT.	HEAD. ³	HT.	LOD.	DIS.	SCORE	FDK	RUST	WORTH
VARIETY	03	04	05	AVG	LBS/BU	%	1-9	1-9	1-9	1-9	1-9	%	1-9	1-9
KELBY	68.5	76.5	65.1	69.7	61.2	15.3	3.3	4.0	2.8	3.7	4.1	3.6	2.9	3.4
98S0127-06	65.0	75.6	65.4	68.7	60.0	14.3	5.1	4.3	1.7	4.0	4.2	8.3	3.5	3.2
TROOPER ¹	66.5	76.7	59.2	66.7	61.1	14.6	3.3	4.3	1.0	5.2	4.1	7.8	1.8	4.3
BRIGGS	61.7	74.4	63.3	66.6	60.6	15.4	2.8	6.6	6.2	3.5	4.0	7.6	2.4	4.9
KNUDSON	63.1	75.1	61.6	66.4	59.7	14.2	5.2	5.4	2.6	2.9	4.4	6.0	2.0	4.1
FREYR	65.3	74.5	58.3	65.3	59.5	15.1	4.7	6.6	3.3	3.9	3.4	3.7	3.9	4.8
STEELE ND ¹	62.5	68.7	58.5	62.8	60.6	15.6	4.4	7.1	5.7	3.9	4.2	9.0	1.1	6.4
GRANGER	65.3	67.3	53.8	60.9	60.2	15.1	3.5	8.1	6.0	4.6	4.5	5.1	4.0	6.4
OXEN	59.9	68.8	54.9	60.6	56.8	14.6	4.3	5.8	3.8	7.1	4.8	10.0	6.6	6.3
NORPRO	61.4	70.7	51.2	60.0	56.7	14.9	5.6	4.6	2.4	3.4	5.7	16.0	3.5	3.7
ALSEN	59.9	69.3	51.6	59.3	60.5	15.8	4.1	6.0	3.1	4.9	3.8	2.8	4.8	4.9
REEDER	57.5	69.0	53.0	59.3	58.8	15.1	4.5	7.1	4.4	5.3	4.9	13.3	6.6	5.7
LARS	57.8	67.7	51.0	58.1	55.7	14.0	5.9	4.0	1.4	4.6	6.6	23.1	5.3	4.0
HANNA	57.3	68.4	50.3	57.9	59.6	15.4	4.9	8.1	4.6	5.2	3.8	2.8	5.4	5.6
GRANITE	65.3	64.3	45.6	56.2	60.6	16.5	7.0	6.0	1.2	4.7	5.0	19.6	4.8	4.9
NORA	51.0	62.1	44.0	51.6	56.9	16.0	4.9	3.8	2.9	6.4	5.2	14.0	4.9	5.4
GUNNER	50.5	56.8	38.4	47.2	58.7	15.5	7.0	7.8	2.7	6.8	3.9	4.4	7.5	5.9
POLARIS ¹	45.9	55.5	38.5	45.8	57.2	14.4	8.6	7.0	1.0	3.8	5.2	18.9	2.5	5.3
MEAN	61.3	70.1	54.5	64.5	59.5	15.0	5.2	5.7	2.8	4.5	4.9	9.6	3.5	4.6
NO. OF LOCS	2	3	4	9	8	8	14	8	4	16	18	21	10	16
¹ Not tested in 2003, adjusted for averages														
² Yield, test weight and protein from SD sites only, remaining data from all sites														
³ Heading: 1= early; Height: 1 = short; Lodging: 1 = no lodging; Foliar disease: 1 = no disease; Leaf rust: 1=very resistant														
SD Locations: Northville, Bristol, Groton and Selby														

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) Syngenta Seeds, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 98S0113-20	3. VARIETY NAME Kelby
4. ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 6515 Ascher Road Junction City, Kansas 66441	5. TELEPHONE (include area code) 785-210-0218	6. FAX (include area code) 785-210-0231
	7. PVPO NUMBER 200600237	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Please see following page.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600.

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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Exhibit E.

Statement of the Basis of Applicant's Ownership

The variety for which Plant Variety Protection is hereby sought was developed by Joe Smith, an employee of Syngenta Seeds, Inc. By agreement between employees and Syngenta, all rights to any invention, discovery, or development made by the employee while employed by Syngenta, were assigned to Syngenta Seeds, Inc., with no rights of any kind pertaining to 'Kelby' being retained by the employees.

The variety 'Kelby' is owned by Syngenta Seeds, Inc.